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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,886

03/14/2007

Yoshiyuki Asai

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EXAMINER

SMITH, LINDA B

ART UNIT

PAPER NUMBER

2862

NOTIFICATION DATE

DELIVERY MODE

07/23/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/599,886	Applicant(s) ASAI ET AL.	
	Examiner LINDA B. SMITH	Art Unit 2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/16/07</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Paragraph [0037], page 24 - Fig. 5, does not contain "an illuminance sensor SL".

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "wherein the protrusion abutted" in page 5, line 2 of claim 6.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Momma (US PG. Pub. No. 2004/0218810) in view of Nishinaga et al. (US PG. Pub. No. 2006/0170891 and hereinafter Nishinaga).

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8. As to claim 2, Momma discloses a face imaging device in which an illumination light source (**131-134**) for illuminating a illumination light to a face is disposed in a casing (**100**) having an opening formed at the front thereof for inserting the face as an object to be imaged (**0023,0027-0028 and Fig. 2**), a light diffusion plate (**160**) is disposed between the opening and the illumination light source for diffusing a light illuminated from the illumination light source to the front side of the face (**0028**), and an imaging camera (**120**) for imaging the face through a permeation hole (**164**) formed in the light diffusion plate is located at the back thereof (**Fig. 2**).

Momma does not disclose:

a light shielding body located between the illumination light source and the imaging camera for shielding a light incident to the imaging camera without transmitting the permeation hole, among the lights illuminated from the illumination light source.

Nishinaga discloses an exposure apparatus having:

a light shielding body (**43,55**) located between the illumination light source and the imaging camera for shielding a light incident to the imaging camera without transmitting the permeation hole, among the lights illuminated from the illumination light source (**0126-0127,0131-0132,0139,0144**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the skin image capturing box of Momma with a light shielding body as disclosed by Nishinaga to provide a means to allow the light to come through a pinhole light transmitting section (i.e. permeation hole) of the light shielding section without being totally reflected. The light shielding body also reduces or prevents stray light or light with a wide incident angle from interfering with imaging as well as shielding the patient from unnecessary light exposure.

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9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Momma.

10. As to claim 5, Momma discloses the claimed invention except for a face holding mechanism for holding the face as an object at a focused focal point of the imaging camera by a head support member capable of adjusting the forward-to-backward and vertical positions for restricting the position of a head by abutment against a head top non-observation region of the face inserted in the casing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a means to adjust the head support member based on the individual under examination, since it has been held that the provision of adjustability, where needed, involves only routine skill in the art.

11. Claims 1, 3, 4, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Momma in view of Nishinaga, and further in view of Hamada (JP 08-299267).

12. As to claims 1, 3, 4, 6 and 9, Momma discloses a face imaging device in which an illumination light source for illuminating a visible light to a face is disposed in a casing **(100)** having an opening formed at the front thereof for inserting the face as an object to be imaged **(0023 and Fig. 1)**, a light diffusion plate **(160)** is disposed between the opening and the illumination light source for diffusing a light illuminated from the illumination light source to the front side of the face **(0027,0029 and Fig. 2)**, and an imaging camera **(120)** for imaging the face through a permeation hole formed in the light diffusion plate is located at the back thereof **(0024-0025 and fig. 1)**, including, and a jaw rest **(175)** for restricting the position of the jaw in accordance with the imaging direction such that the front and the right or left cheeks of the face are faced to the imaging camera **(0029 and Fig. 2)** [claim 1].

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an auxiliary light source (**135 or 136**) for directly illuminating an auxiliary illumination light for focusing the imaging camera are located out of the imaging area of the imaging camera and at a position not in the shade of the light diffusion plate as viewed from the opening [claim 4] (**0027-0028**).

Momma does not disclose:

a face holding mechanism for holding the face as an object at a focused focal point of the imaging camera by a head support member capable of adjusting the forward-to-backward and vertical positions for restricting the position of a head by abutment against a head top non-observation region of the face inserted in the casing, and a light shielding body located between the illumination light source and the imaging camera for shielding a light incident to the imaging camera without transmitting the permeation hole, among the lights illuminated from the illumination light source [claim 1].

wherein the light shielding body is formed of a reflection mirror for reflecting a light diverged from the illumination light source toward the imaging camera to the diffusion plate [claim 3].

wherein the protrusion abutted against the back of a lower jawbone is formed to the jaw rest [claim 6].

wherein the head support member supports the head top non-observation region of the face at one point and is disposed so as to be movable rightwards and leftwards in accordance with the imaging direction [claim 9].

Nishinaga discloses an exposure apparatus having:

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a light shielding body located between the illumination light source and the imaging camera for shielding a light incident to the imaging camera without transmitting the permeation hole, among the lights illuminated from the illumination light source [claim 1](**0126-0127, 0131-0132, 0139 and 0144**) to provide a means to allow the light to come through a pinhole light transmitting section (i.e. permeation hole) of the light shielding section without being totally reflected.

wherein the light shielding body is formed of a reflection mirror (i.e. Chromium) for reflecting a light diverged from the illumination light source toward the imaging camera to the diffusion plate [claim 3] (**0133,0135,0139**) to provide a means to allow the light to come through a pinhole light transmitting section (i.e. permeation hole) of the light shielding section without being totally reflected.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Momma with a light shield body as disclosed by Nishinaga to provide a means to allow the light to come through a pinhole light transmitting section (i.e. permeation hole) of the light shielding section without being totally reflected. The light shielding body also reduces or prevents stray light or light with a wide incident angle from interfering with imaging as well as shielding the patient from unnecessary light exposure.

Hamada discloses chin rest for eye examination having:

a face holding mechanism (**8**) for holding the face as an object at a focused focal point of the imaging camera by a head support member capable of adjusting the forward-to-backward and vertical positions for restricting the position of a head by abutment against a head top non-observation region of the face inserted in the casing [claim 1](**abstract, Fig. 1, 0010-0011 and**

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0013-0014) to provide an adjustable face holding mechanism that can be adjusted based on the individual physical limitations.

wherein the protrusion abutted against the back of a lower jawbone is formed to the jaw rest [claim 6] (**Fig. 1, 0013**) to provide a jaw supporting part to stably hold the place in the proper location during imaging in order to provide accurate imaging of the eye.

wherein the head support member supports the head top non-observation region of the face at one point and is disposed so as to be movable rightwards and leftwards in accordance with the imaging direction [claim 9] (**0010-0011, 0013**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Momma as modified by Nishinaga with an adjustable face holding mechanism as taught by Hamada to provide an adjustable face holding mechanism that can be adjusted based on the individual physical limitations. Also, it will also reduce time to align the position of the eye thereby reducing focal error during examination.

13. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Momma, Hamada and Nishinaga as applied to claim 1 above, and further in view of Zeskind et al. (US PG Pub. No. 2006/0188869 and hereinafter Zeskind).

Although the combined teachings of Momma, Hamada and Nishinaga shows substantial features of the claimed invention (discussed above), they fail to disclose:

wherein a UV-light source for directly illuminating a UV-light to the face inserted into the opening.

Zeskind discloses method and apparatus for UV imaging having:

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wherein a UV-light source (3) for directly illuminating a UV-light to the face inserted into the opening (0007,0035,0036,0040).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Momma as modified by Nishinaga and Hamada with a UV-light source as disclosed by Zeskind to provide different illumination conditions to more clearly show portions of a subject's face as well as provide a better contrast under observation. Also, a UV-light is not affected by ambient light and can be used in a broad range of environments.

14. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Momma, Nishinaga and Hamada as applied to claim 1 above, and further in view of Baker (US Patent No. 7,401,921).

Although the combined teachings of Momma, Hamada and Nishinaga shows substantial features of the claimed invention (discussed above), they fail to disclose:

wherein the jaw rest comprises a plurality of jaw rest portions arranged in accordance with the imaging direction [claim 7]. wherein the jaw rest includes a jaw rest portion disposed so as to be movable rightwards and leftwards in accordance with the imaging direction [claim 8].

Baker discloses motorized patient support for eye examination or treatment having:

wherein the jaw rest comprises a plurality of jaw rest portions(152,154) arranged in accordance with the imaging direction [claim 7] (col. 4, lines 52-66) to provide multiples chin placements in order to move a patients face from side to side to photograph with changing other parameters.

wherein the jaw rest includes a jaw rest portion disposed so as to be movable rightwards and leftwards in accordance with the imaging direction [claim 8] (col. 4, lines 62-65).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system of Momma as modified by Nishinaga and Hamada with a jaw rest portion that can be movable right and left as disclosed by Baker to provide a jaw rest portion is movable with the patient needing to move their face, it allows the eye to be photographed with better precision and focus.

15. Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Momma, Nishinaga and Hamada as applied to claim 1 above, and further in view of Reinhardt et al. (US Patent No. 6,381,783 and Reinhardt).

Although the combined teachings of Momma, Hamada and Nishinaga shows substantial features of the claimed invention (discussed above), they fail to disclose:

wherein the head support member supports the head top non-observation region of the face at two right and left points.

Reinhardt discloses a head clamp having:

wherein the head support member (**19**) supports the head top non-observation region of the face at two right and left points (**col. 9, lines 14-48, col. 10, lines 22-34 and Fig. 2**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system of Momma as modified by Nishinaga and Hamada with a head support member as disclosed by Reinhardt to develop a head clamp of the generic type in such a way that a greater mechanical stability is achieved when the patient's heading is being positioned for imaging.

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16. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Momma, Nishinaga and Hamada as applied to claim 1 above, and further in view of Cheng et al. (US PG Pub. No. 2007/0034775 and hereinafter Cheng).

Although the combined teachings of Momma, Hamada and Nishinaga shows substantial features of the claimed invention (discussed above), they fail to disclose:

including a color temperature variable light source as the illumination light source, a color temperature detection sensor for detecting the color temperature of the illumination light, and a control device for variably controlling the color temperature of the illumination light source to a predetermined aimed color temperature based on the detected color temperature [claim 11].

wherein two or more kinds of light sources for illuminating lights of different color temperatures are provided as the color temperature variable light sources and the color temperature is controlled by the ratio of the light amount for each of the light sources [claim 12].

including an illuminance/color temperature variable light source as the illumination light source, a illuminance sensor and a color temperature detection sensor for detecting the illuminance and the color temperature of the illumination light and a control device for variably controlling the illuminance and the color temperature of the illumination light source to aimed illuminance and aimed color temperature based on the detected color temperature [claim 13].

wherein two or more kinds of light sources for illuminating lights of different color temperatures are provided as the illuminance/color temperature varying light source, the color temperature is controlled by the ratio of the light amount of each of the light sources, and the illuminance is controlled by the sum of the light amount [claim 14].

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Cheng discloses a calibrated LED light module having:

including a color temperature variable light source (**10**) as the illumination light source, a color temperature detection sensor (**15**) for detecting the color temperature of the illumination light, and a control device (**14**) for variably controlling the color temperature of the illumination light source to a predetermined aimed color temperature based on the detected color temperature [claim 11] (**0010,0012 and 0017-0018**) to provide a means for each LED to generate light of an average intensity that is determined by a drive signal coupled to that LED, the light source can provide an input/interface that allows the use to change the apparent color temperature of the light from the light source in order to provide a better contrast for imaging the face exposing otherwise unnoticeable areas.

wherein two or more kinds of light sources for illuminating lights of different color temperatures are provided as the color temperature variable light sources and the color temperature is controlled by the ratio of the light amount for each of the light sources [claim 12] (**0017-0018, 0026**) to provide light sources that provide different color temperatures in order to provide a better contrast for imaging as well as control the light intensity of each color temperature.

including an illuminance/color temperature variable light source (**10**) as the illumination light source, a illuminance sensor and a color temperature detection sensor (**15,55**) for detecting the illuminance and the color temperature of the illumination light and a control device (**14**) for variably controlling the illuminance and the color temperature of the illumination light source to aimed illuminance and aimed color temperature based on the detected color temperature [claim 13] (**0010,0012 and 0017-0018**) to provide a means for each LED to generate light of an average

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intensity that is determined by a drive signal coupled to that LED, the light source can provide an input/interface that allows the use to change the apparent color temperature of the light from the light source in order to provide a better contrast for imaging the face exposing otherwise unnoticeable areas.

wherein two or more kinds of light sources for illuminating lights of different color temperatures are provided as the illuminance/color temperature varying light source, the color temperature is controlled by the ratio of the light amount of each of the light sources, and the illuminance is controlled by the sum of the light amount [claim 14] **(0017-0018)**.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system of Momma as modified by Nishinaga and Hamada with two or more kinds of light sources having different color temperatures as disclosed by Cheng to provide a means to different color temperatures with a plurality of light sources that will allow better contrast for imaging as well as sensors being able measures a weighted sum of the light from each of the LEDs **(0028)**.

Prior Art Made of Record

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Weiss (US Patent No. 5,167,074) discloses an apparatus for positioning segment on an eyeglass lens.
- b. Morohashi (US Patent No. 4,431,279) discloses an eye periphery portion illuminating device in an ophthalmologic instrument.

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- c. Mullani (US Patent No. 7,027,153) disclose dermoscopy epilumninescence device employing multiple color illumination sources.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINDA B. SMITH whose telephone number is (571)270-3827. The examiner can normally be reached on Monday through Friday 9:00AM-6:30PM EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Linda B Smith/
Examiner, Art Unit 2862

/Patrick J Assouad/

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Supervisory Patent Examiner, Art Unit 2862